

This is a repository copy of *A Personal Matter?*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/153187/>

Version: Accepted Version

---

**Article:**

Smith, David Kelham orcid.org/0000-0002-9881-2714 (2019) *A Personal Matter? Matter*. pp. 1439-1442. ISSN 2590-2393

---

**Reuse**

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

**Takedown**

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing [eprints@whiterose.ac.uk](mailto:eprints@whiterose.ac.uk) including the URL of the record and the reason for the withdrawal request.

## A Personal Matter?

“University is meant to be a professional working environment. Why this questionnaire is asking such childish questions is beyond me. Outside of the department, in a social setting, this would be fine. But inside the department we are all just scientists, regardless of gender or sexual orientation, etc.”

*Cisgender heterosexual male respondent to the LGBT+ Physical Scientists Workplace Survey*

Are we all just scientists, regardless of gender or sexual orientation? Is science just a meritocratic system, free from any bias and discrimination? What do LGBT+ scientists themselves think?

One of the difficulties of understanding LGBT+ experiences in science, is that such individuals are often hidden from view, sometimes by active choice, sometimes through fear, sometimes simply because they omit to say.<sup>1</sup> For this reason, the Royal Society of Chemistry, the Institute of Physics, and the Royal Astronomical Society combined forces to carry out the largest ever survey of UK LGBT+ physical scientists to fully understand their workplace experiences. This survey, with over 1000 responses, led to the publication of a major report based on real ‘lived’ LGBT+ experiences.<sup>2</sup>

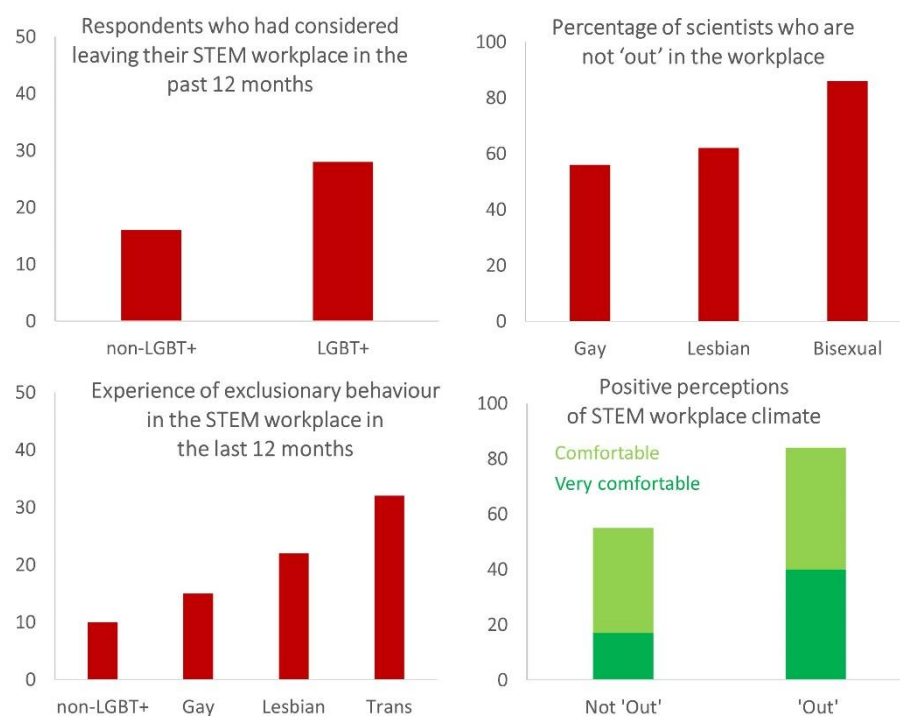
Most importantly, do sexuality and identity matter – or are they just something private, something personal, that have no impact on work?



As a headline figure, the survey found that 28% of LGBT+ respondents had considered leaving their workplace because of the environment, whereas non-LGBT+ respondents were only about half as likely (16%) to feel this way. Amongst those considering leaving the workplace, trans and non-binary scientists were particularly likely to do so – almost 50% having sometimes considered it. The data indicate genuine differences in the experiences of LGBT+ people in the STEM workplace – exploring the reasons was a key priority of the survey.

The survey found that LGBT+ scientists were significantly more likely to experience exclusionary, intimidating or offensive behaviour at work. While only 10% of heterosexual respondents reported this kind of experience, this figure rose to 15% for gay men, 22% for lesbian women and 32% for transgender individuals. The worse experiences of women obviously intersect with the gender discrimination that is prevalent in science.<sup>3</sup> Exclusionary behaviour has very high incidence for transgender individuals, who are currently the subject of persistent and hostile efforts to deny their identities and rights.<sup>4</sup>

The survey also obtained rich descriptions of the lived experiences of LGBT+ scientists to put the data into context. Respondents noted that workplaces, along with general societal attitudes, were improving, but that exclusionary behaviour could range from a simple inability to openly discuss their personal life, leading to a lack of integration in workplace culture, through to 'off-colour' jokes or even discriminatory comments and actions. Several respondents noted that things would be said about LGBT+ scientists, often in their absence, which would never be said about those with other protected characteristics, creating an unwelcoming culture. Transgender individuals reported persistent and deliberate misgendering and in some cases, very significant harassment.



*Figure. Representation of data from the LGBT+ Physical Scientists Workplace Survey.<sup>2</sup>*

Most importantly, LGBT+ scientists who were 'out' at work reported being happier, experiencing significantly more inclusive workplaces, with better policies and procedures. Indeed, 84% of 'out' staff had positive perceptions of climate, while this figure fell to only 54% for staff who were not 'out' at work. Similar things were also found by a major US survey of LGBT+ experiences in STEM workplaces.<sup>5</sup> Clearly, a more supportive environment will encourage more people to come 'out', and furthermore having 'out' individuals to advocate clearly for LGBT+ rights and act as role models can significantly improve the

scientific environment. A virtuous cycle is therefore set up which significantly benefits the wider STEM culture, and hence all LGBT+ staff.

However, there are real challenges in coming 'out' at work – indeed the majority of LGBT+ physical scientists are not 'out' – 56% of gay men, 62% of lesbian women and 86% of bisexuals hide their identities. Some scientists actually liked the fact they could 'hide' their individuality in science, which then acted as an escape route from challenges in their own personal lives. However, for most, the decision not to come out was driven by the prevailing culture. Many LGBT+ scientists worry about receiving a negative response, or being frozen out of the 'in-groups' who decide on promotions, publication success, grant funding and networking opportunities. It is also worth reflecting that bisexual individuals have the highest levels of invisibility; their sexuality is often assumed to be heterosexual, particularly if they sometimes present with an opposite sex partner.

Perhaps the biggest barrier to coming out, however, is the usually unspoken attitude highlighted at the top of this article that sexuality or identity simply do not matter, and are not relevant, in a STEM workplace.<sup>6,7</sup> This heteronormative view<sup>8</sup> also feeds into the worry of many LGBT+ scientists that their sexuality is indeed personal, and that they are somehow oversharing to talk about it.

Although unconscious bias, and even discrimination, exist in all workplaces, the emphasis of science on evidence and facts, a belief in meritocracy, and a predisposition of many scientists against the anecdotal or personal, makes the STEM environment particularly toxic to minority groups. Interestingly, it has been noted that scientists that believe their workplace is purely meritocratic are less likely to recognise a 'chilly' workplace climate.<sup>9</sup> Yet as clear evidence of a 'chilly' STEM climate, LGBT+ students are more likely to drop out from studying STEM subjects than non-STEM ones.<sup>10</sup> The attitudes within science therefore reinforce the path of least resistance – hiding identity – leading to a negative cycle of ongoing invisibility and lack of inclusion.<sup>11</sup>

The professional reliance of scientists on evidence and data means that careful surveys, such as the one being discussed here, can play a powerful role in gathering the required evidence initiate change.

Interestingly, although many scientists will think, or even say, that LGBT+ identities are personal, and not for the workplace, these same scientists will happily talk about their own partners, children and social lives in work, as part of building the 'in-group' culture in which they thrive. We really need minority groups to be similarly empowered to engage with these types of discussions.

In terms of institutional culture, although things are improving in places like the UK, there is still a long way to go. When asked about their employer's policies, 32% of gay men, 43% of lesbian women and 68% of transgender individuals felt they were uneven or worse. And globally, the situation is far worse than that.

The report suggests three key areas for action by scientific employers that would improve the experience for LGBT+ scientists – building a visibly welcoming community, reviewing and improving policies and introducing and improving training.

**1. Build a visibly welcoming community.** ‘Out’ individuals (including at senior levels), role models, symbolic acts (‘Pride’ activities, rainbow lanyards, pronoun sharing), safe spaces where people can talk about life outside work, small daily actions to build an atmosphere of inclusion.

**2. Review and improve policies.** LGBT+-inclusive harassment and discrimination policies, policies to support international LGBT+ staff and those travelling to LGBT+-unfriendly places, software systems that better manage changes of name/gender.

**3. Introduce and improve training.** In consultation with LGBT+ stakeholders training on LGBT+ issues should be provided to all staff (e.g., pronoun usage, bystander training etc.), management to exemplify best practice and communicate effectively on LGBT+ issues.

Formal and informal support networks can be massively powerful for LGBT+ people. Many scientists noted the power of social networks in helping them connect with other scientists more like them. Traditionally the scientific ‘in-crowd’ has been heterosexual, white, male and middle aged – primarily because this constitutes the majority of scientists and there are established mechanisms of power and patronage. Social media allows the nucleation of minority groups into critical mass ‘in-crowds’ spanning institutions and even reaching between continents, supporting one another.<sup>12</sup> This can provide minority scientists with the strength to start changing the prevailing culture from the bottom up. The annual LGBTSTEMinar in the UK is an example of this – a remarkable event bringing together LGBT+ individuals from across STEM to share their science and their unique experiences, building collaborations, alliances and friendships.<sup>13</sup>

Scientific societies can also play a major role in redefining the scientific culture. Recent American Chemical Society meetings have included specific sessions and receptions for LGBT+ chemists, as well as similar events for other minority groups. They distribute ‘pronoun’ badges at their conferences and have instituted zero-tolerance policies on harassment. The RSC, IOP and RAS commissioned the survey being discussed here, and have strongly supported the LGBTSTEMinar. As such, there is considerable potential for societies to subvert the existing power structures in science and act as agents for diversity and change. However, this requires ongoing hard work and targeted actions, as dominant cultures are notoriously difficult to shift.

So, does being an LGBT+ scientist matter? Or are you just a scientist, who is LGBT+ in your personal life? Clearly, if LGBT+ minorities experience more exclusion at work, and are less happy being hidden in their workplaces, it really does matter. The survey demonstrably shows that being ‘out’ makes for happier scientists and better workplace cultures.

Crucially, science is not only about the results at the end of an experiment, it is about the culture that allows individuals to thrive and hence achieve those results. It is about the

diverse teams that develop innovative approaches to solve big problems. If the scientific culture is lacking, diverse teams will never form, and some of our best individuals will be lost.

Of course, the need for culture change does not only apply to LGBT+ scientists, it applies to all of those traditionally excluded from STEM – women, ethnic minorities, the disabled and those with socioeconomic disadvantage (as well as the intersections between all of these groups). Making progress in changing the culture for any of these groups is beneficial for the others, as it begins to break down established power structures, helping diverse voices to feel empowered to succeed. Ultimately, diverse scientists empowered to solve diverse problems in a supportive culture are what we need. Personal inclusion does matter – both personally, and for the success of science.

---

## References

- 1 D. K. Smith, Hidden diversity steps out from the closet, RSC News, 2018, <https://www.rsc.org/news-events/opinions/2018/jul/david-smith-lgbtstem-day/>
- 2 Exploring the workplace for LGBT+ physical scientists, Royal Society of Chemistry, 2019, <https://www.rsc.org/campaigning-outreach/campaigning/incldiv/lgbt-report/>
- 3 Breaking the barriers: women's retention and progress in the chemical sciences, Royal Society of Chemistry, 2018 <https://www.rsc.org/campaigning-outreach/campaigning/incldiv/inclusion--diversity-resources/womens-progression/>
- 4 LGBT in Britain – Trans Report, Stonewall, 2018, <https://www.stonewall.org.uk/lgbt-britain-trans-report>
- 5 J. B. Yoder, A. Mattheis, A. Queer in STEM: Workplace experiences reported in a national survey of LGBTQA individuals in science, technology, engineering, and mathematics careers. *Journal of Homosexuality*, 2016, 63, 1–27, <https://www.tandfonline.com/doi/full/10.1080/00918369.2015.1078632>
- 6 E. A. Cech, The (mis)framing of social justice: Why ideologies of depoliticization and meritocracy hinder engineers' ability to think about social injustices. In J. Lucena (Ed.), *Engineering education for social justice: Critical explorations and opportunities* (pp. 67–84), Springer Netherlands, 2013, [https://link.springer.com/chapter/10.1007/978-94-007-6350-0\\_4](https://link.springer.com/chapter/10.1007/978-94-007-6350-0_4)
- 7 D. K. Smith, 'No sexuality please we're scientists', *Chemistry World*, 2014, <https://www.chemistryworld.com/opinion/no-sexuality-please-were-scientists/7197.article>
- 8 A. Mattheis, D. Cruz-Ramirez De Arellano, J. B. Yoder, A Model of Queer STEM identity in the Workplace, *J. Homosexuality*, 2019, DOI: [10.1080/00918369.2019.1610632](https://doi.org/10.1080/00918369.2019.1610632).
- 9 E. A. Cech, M. Blair-Loy, L. E. Rogers, Recognizing chilliness: How schemas of inequality shape views of culture and climate in work environments, *Am. J. Cultural Sociol.*, 2018, 6, 125-160, <https://link.springer.com/article/10.1057/s41290-016-0019-1>
- 10 B. E. Hughes, Coming out in STEM: Factors affecting retention of sexual minority STEM students, *Sci. Adv.* 2018, 4, eaao6373, <https://advances.sciencemag.org/content/4/3/eaao6373.short>

- 
- 11 M. Suri, Why is Science so Straight?, New York Times 2015,  
<https://www.nytimes.com/2015/09/05/opinion/manil-suri-why-is-science-so-straight.html>
  - 12 A. L. Gonzales, Disadvantaged Minorities' Use of the Internet to Expand Their Social Networks, *Communication Research*, 2017, 44, 467-486.  
<https://journals.sagepub.com/doi/full/10.1177/0093650214565925>
  - 13 V. Gewin, Turning Point: Out for Chemistry, *Nature*, 2016, **531**, 265,  
<https://www.nature.com/naturejobs/science/articles/10.1038/nj7593-265a>